

**AMENDMENTS TO THE CLAIMS**

1. (currently amended) ~~Use of a~~ A catalyst for heterogeneous catalysis comprising a  $\beta$ -SiC support and at least one active phase, the said catalyst being obtainable by ~~using~~ a process comprising ~~at least the following steps:~~

(a) impregnation of ~~the~~ said support having a specific surface area, determined by the BET nitrogen adsorption method at the temperature of liquid nitrogen according to standard NF X 11-621, equal to at least

2 m<sup>2</sup>/g and comprising macropores with a size ~~between~~ from 0.05 ~~and to~~ 10  $\mu$ m and optionally also mesopores with a size ~~between~~ from 4 ~~and to~~ 40 nm, with at least one active phase precursor, ~~the~~ said impregnation being done by an impregnation process comprising at least a first impregnation ~~step~~ during which ~~the~~ said support is impregnated at least once by a polar agent A, and a second impregnation ~~step~~ during which ~~the~~ said support is impregnated at least once by an agent B less polar than agent A, ~~knowing that~~ wherein at least agent B comprises at least one active phase precursor,

(b) thermal breakdown of ~~the~~ said precursor,

~~the said use being as a~~ wherein said catalyst is capable of being used for a chemical reaction[[s]] selected among from the group consisting of oxidation of methane or other hydrocarbons, oxidation of carbon monoxide, ~~or as a catalyst for~~ and depollution of exhaust gases of vehicles with internal combustion engines.

2. (currently amended) ~~Use~~ A catalyst according to claim 1, ~~characterised in that the~~ wherein said active phase precursor is a metallic compound.

3. (currently amended) ~~Use~~ A catalyst according to claim 2, ~~characterised in that~~ wherein the metal ~~contained in the said metallic compound of agent A and / or agent B~~ is selected ~~among~~ from the group ~~composed~~ consisting of the Fe, Ni, Co, Cu, Pt, Pd, Rh, Ru, and Ir elements.

4. (currently amended) Use A catalyst according to claim 2 ~~or 3~~, ~~characterised in that the wherein~~ said metallic compound ~~contained in the said agents~~ is either a salt dissolved in a solvent, or an organo-metallic compound.
5. (currently amended) Use A catalyst according to claim 4, ~~characterised in that the wherein~~ said organo-metallic compound is either dissolved in a solvent, or used in its a pure state.
6. (currently amended) Use A catalyst according to ~~any one of claim[[s]] 1 to 5~~, ~~characterised in that the wherein~~ said support is in the form of balls, fibres, tubes, filaments, felt, extruded materials, foams, monoliths or pellets.
7. (currently amended) Use A catalyst according to ~~any one of claim[[s]] 1 to 6~~, ~~characterised in that the wherein~~ said support has a BET specific surface area ~~more than 2 of at least 10 m<sup>2</sup>/g, more than 10 m<sup>2</sup>/g, and preferably more than 20 m<sup>2</sup>/g.~~
8. (currently amended) Use A catalyst according to ~~any one of claim[[s]] 1 to 7~~, ~~characterised in that the wherein~~ said support has a BET specific surface area between from 2 and to 100 m<sup>2</sup>/g.
9. (currently amended) Use A catalyst according to claim 8, ~~characterised in that the wherein~~ said macropores have a size between from 0.05 and to 1 µm.
10. (currently amended) Use A catalyst according to ~~one of claim[[s]] 1 to 9~~, ~~characterised in that the wherein~~ a maximum size distribution of the said macropores is between from 0.06 and to 0.4 µm, and preferably between 0.06 and 0.2 µm.
11. (currently amended) Use A catalyst according to ~~any one of claim[s]] 1 to 10~~, ~~characterised in that wherein~~ the impregnation method (a) comprises ~~also~~ at least one drying step after the first and / or the second impregnation ~~step.~~
12. (currently amended) Use A catalyst according to ~~any one of claim[[s]] 1 to 11~~, ~~characterised in that wherein~~ the impregnation method (a) comprises ~~also~~ at least a preliminary

treatment of the support that introduces hydrophobic and / or hydrophilic functions on the a surface of the said support.

13. (currently amended) Use A catalyst according to ~~any one of claim[[s]] 1 to 12,~~ ~~characterised in that the~~ wherein said precursor at least partially forms a metallic oxide during its thermal breakdown.

14. (currently amended) Use A catalyst according to claim 13, ~~characterised in that~~ wherein the thermal breakdown of the said precursor is followed by a treatment under a reactive gas.

15. (currently amended) Use A catalyst according to claim 13 ~~or 14,~~ ~~characterised in that the~~ wherein said treatment under a reactive gas is a reduction treatment.

16. (currently amended) Use A catalyst according to claim 15, ~~characterised in that the~~ wherein said reduction treatment ~~has been~~ is carried out in an atmosphere containing hydrogen H<sub>2</sub>.

17. (currently amended) Use A catalyst according to ~~one of claim[[s]] 1 to 16,~~ ~~characterised in that~~ wherein the support, which has been dried after the a last impregnation step, is calcined under air at a temperature ~~between~~ from 200°C to and 500°C, ~~and preferably between 300°C and 400°C.~~

18. (currently amended) A [[M]]method of impregnation of a  $\beta$ -SiC support with a specific surface area, determined by the BET nitrogen adsorption method at the temperature of liquid nitrogen according to standard NF X 11-621, equal to at least 2 m<sup>2</sup>/g and comprising macropores with a size ~~between~~ from 0.05 ~~and to~~ 10  $\mu$ m, and optionally also mesopores with a size ~~between~~ from 4 ~~and to~~ 40 nm, the said process comprising ~~at least the following steps:~~

- (a) a first impregnation ~~step~~ during which the said support is impregnated at least once by a polar agent A,
- (b) a second impregnation ~~step~~ during which the said support is impregnated at least once by an agent B less polar than agent A,

and ~~in which process~~ wherein at least one agent B among the said agents A and B comprises at least one active phase precursor.

19. (currently amended) A ~~[[M]]~~method according to claim 18, ~~characterised in that the~~ wherein said support has a specific surface area equal to at least  $10 \text{ m}^2/\text{g}$ .

20. (currently amended) A ~~[[M]]~~method according to claim 19, ~~characterised in that~~ wherein the average size of the said macropores of the said support is ~~between~~ from  $0.05$  ~~and~~ to  $1 \text{ }\mu\text{m}$ .

21. (currently amended) A ~~[[M]]~~method according to claim ~~[[s]]~~ 18 ~~to~~ 20, ~~characterised in that the~~ wherein a maximum value in the a distribution of the said macropores by size is ~~between~~ from  $0.06$  ~~and~~ to  $0.4 \text{ }\mu\text{m}$ , ~~and preferably between 0.06 and 0.2~~ and preferably between 0.06 and 0.2  $\mu\text{m}$ .

22. (currently amended) A ~~[[P]]~~product that can be obtained using the a method according ~~one of claim~~ ~~[[s]]~~ 18 ~~to~~ 21.